

WHAT IS CLAIMED IS:

1. A vibrational power generation device vibrator comprising:

first and second electrodes constituting a first capacitance;

third and fourth electrodes constituting a second capacitance;

a vibrator provided with said first and third electrodes;

an electrode base provided with said second and fourth electrodes;

a vibrator pedestal for fixing said vibrator onto said electrode base; and

an electrode terminal respectively connected to said first to fourth electrodes and performing an input and output of electric charges from the exterior,

wherein said vibrator includes a mass performing an undriven vibration and two oscillation plates for supporting said mass,

wherein said oscillation plates sandwich and support a first surface of said mass and a second surface opposite thereto in a mutually parallel manner, and

wherein said vibrator is operated through vibrational energy to change a capacitance by controlling a distance between said first and third electrodes and a distance between said second and fourth electrodes provided at said vibrator.

2. The vibrational power generation device vibrator according to claim 1,

wherein said first electrode is provided on a first surface of said vibrator,

wherein said third electrode is provided on a second surface of said vibrator facing said first surface,

wherein said second electrode is provided at said electrode base so as to face said first electrode, and

wherein said fourth electrode is provided at said electrode base so as to face said third electrode.

3. The vibrational power generation device vibrator according to claim 1,

wherein said first and third electrodes are provided on a first surface of said vibrator, and

wherein said second and fourth electrodes are provided at said electrode base so as to respectively face said first and third electrodes.

4. The vibrational power generation device vibrator according to claim 1,

wherein said first electrode is provided on a first surface of said vibrator,

wherein said third electrode is provided on a second surface of said vibrator facing said first surface,

wherein said second electrode is provided at said electrode base so as to face said first electrode,

wherein said fourth electrode is provided at said electrode base so as to face said third electrode, and

wherein said electrode base is provided with a contact prevention device for preventing contact between said first and third electrodes and said second and fourth electrodes at the time when said vibrator is operated through vibrational energy.

5. The vibrational power generation device vibrator according to claim 1,

wherein said first and third electrodes are provided on a first surface of said vibrator,

wherein said second and fourth electrodes are provided at said electrode base so as to respectively face said first and third electrodes,

said electrode base comprising:

a contact prevention device for preventing contact between said first and third electrodes and said second and fourth electrodes at the time when said vibrator is operated through vibrational energy; and

an oscillation control structure for suppressing excessive vibration of said oscillation plates at the time when said vibrator is operated through vibrational energy.

6. A vibrational power generation device vibrator comprising:

first and second electrodes constituting a first capacitance;

a vibrator provided with said first and second electrodes;

a vibrator pedestal for fixing said vibrator onto an

electrode base; and

an electrode terminal respectively connected to said first and second electrodes and performing an input and output of electric charges from the exterior,

wherein said vibrator includes a mass performing an undriven vibration and two oscillation plates for supporting said mass,

wherein said oscillation plates sandwich and support a first surface of said mass and a second surface opposite thereto in a mutually parallel manner, and

wherein said vibrator is operated through vibrational energy to change a capacitance by controlling a distance between said first and third electrodes and a distance between said second and fourth electrodes provided at said vibrator.

7. The vibrational power generation device vibrator according to claim 6,

wherein said electrode base is provided with a contact prevention device for preventing contact between said first and second electrodes at the time when said vibrator is operated through vibrational energy.

8. The vibrational power generation device vibrator according to claim 6,

wherein said electrode base comprises:

a contact prevention device for preventing contact between said first and second electrodes at the time when said vibrator is operated through vibrational energy, and

an oscillation control structure for suppressing excessive vibration of said oscillation plates at the time when said vibrator is operated through vibrational energy.

9. The vibrational power generation device vibrator according to claim 6,

wherein said oscillation plates comprise:

two or more first oscillation plates for supporting said first surface of said mass; and

two or more second oscillation plates for supporting said second surface of said mass.

10. The vibrational power generation device vibrator according to claim 6,

wherein said oscillation plates each comprise:

two or more first oscillation plates for supporting said first surface of said mass; and

two or more second oscillation plates for supporting said second surface of said mass, and

wherein said electrode base includes a contact prevention device for preventing contact between said first and second electrodes at the time when said vibrator is operated through vibrational energy.

11. The vibrational power generation device vibrator according to claim 6,

wherein said oscillation plates each comprise:

two or more first oscillation plates for supporting said first surface of said mass; and

two or more second oscillation plates for supporting

said second surface of said mass, and

wherein said electrode base comprises:

a contact prevention device for preventing contact between said first and second electrodes at the time when said vibrator is operated through vibrational energy; and

an oscillation control structure for suppressing excessive vibration of said oscillation plates at the time when the vibrator operates through vibrational energy.

12. A vibrational power generation device vibrator comprising:

first and second electrodes constituting a first capacitance;

a vibrator provided with said first and second electrodes;

a vibrator pedestal for fixing said vibrator onto said electrode base; and

an electrode terminal respectively connected to said first and second electrodes and performing an input and output of electric charges from the exterior,

wherein said vibrator includes $n-1$ masses performing undriven vibration and n oscillation plates for supporting said $n-1$ masses,

wherein said n oscillation plates sandwich and support first surfaces of said $n-1$ masses and second surfaces opposite thereto in a mutually parallel manner, and

wherein said vibrator is operated through vibrational

energy to change a capacitance by controlling a distance between said first and second electrodes provided at said vibrator.

13. The vibrational power generation device vibrator according to claim 12,

wherein said electrode base is provided with a contact prevention device for preventing contact between said first and second electrodes at the time when said vibrator is operated through vibrational energy.

14. The vibrational power generation device vibrator according to claim 12,

wherein said electrode base comprises:

a contact prevention device for preventing contact between said first and second electrodes at the time when said vibrator is operated through vibrational energy; and

an oscillation control structure for suppressing excessive vibration of said oscillation plates at the time when said vibrator is operated through vibrational energy.